

CLAIMS

1. A compound of the formula (I):



5 where:

R^1 is the residue of a group having at least m active hydrogen atoms;

AO is an alkylene oxide residue;

each n is independently from 1 to 100;

m is at least 2; and

10 each R^2 is independently H, a C_1 to C_{21} hydrocarbyl, or an acyl group $-OC.R^3$ where R^3 is a C_1 to C_{21} hydrocarbyl group, wherein on average greater than one of the R^2 groups is or comprises a C_4 to C_{21} hydrocarbyl group comprising at least two ethylenic double bonds.

15 2. A compound according to claim 1 wherein R^1 is the residue of a group having at least 3 free hydroxyl and/or amino groups.

3. A compound according to either one of claims 1 and 2 wherein R^1 is the residue of a sugar, preferably a monosaccharide.

20

4. A compound according to any one of the preceding claims wherein R^1 is the residue of sorbitol.

5. A compound according to any one of the preceding claims wherein m is at least 3, preferably in the range from 4 to 10.

25

6. A compound according to any one of the preceding claims comprising in the range from 3 to 10 R^2 acyl groups.

30 7. A compound according to any one of the preceding claims wherein on average at least 1.2 of the R^2 groups is or comprises a C_4 to C_{21} hydrocarbyl group comprising at least two ethylenic double bonds.

8. A compound according to any one of the preceding claims wherein at least one of the R^2 groups is an acyl group $-OC.R^3$ where R^3 is a C_4 to C_{21} hydrocarbyl group comprising at least two ethylenic double bonds.
- 5 9. A compound according to any one of the preceding claims wherein the hydrocarbyl group comprising at least two ethylenic double bonds is derived from linoleic acid.
- 10 10. A compound according to any one of the preceding claims wherein the number of double bonds present in hydrocarbyl groups comprising at least two double bonds is in the range from 2.0 to 2.4.
- 15 11. A compound according to any one of the preceding claims wherein the ratio of R^2 groups comprising hydrocarbyl groups comprising at least two ethylenic double bonds to hydrocarbyl groups not comprising at least two ethylenic double bonds is in the range from 0.7 to 6:1
- 20 12. A compound according to any one of the preceding claims having an iodine value in the range from 45 to 75 g/100 g.
- 25 13. A method of forming a compound of formula (1) as defined in any one of claims 1 to 12 which comprises reacting a fatty acid or derivative thereof having an iodine value in the range from 100 to 250 g/100 g with an alkoxylated R^1 group.
- 30 14. A method according to claim 13 wherein the fatty acid is a mixture comprising at least 15 mole % of fatty acids comprising at least two ethylenic double bonds.
- 35 15. Use of the compound of formula (1) to form an aqueous emulsion or dispersion of polymeric particles.
16. An aqueous emulsion or dispersion of polymeric particles comprising a compound of formula (1) as defined in any one of claims 1 to 12.

17. An aqueous emulsion or dispersion of polymeric particles according to claim 16 wherein the emulsion or dispersion is formed in the presence of a stabilising amount of a compound of formula (1).
- 5 18. An aqueous emulsion or dispersion of polymeric particles according to either one of claims 16 and 17 wherein the polymeric particles comprise an alkyd resin.
- 10 19. An aqueous emulsion or dispersion according to claim 18 wherein the alkyd resin is a resin which is the reaction product of (i) one or more polybasic organic acids or anhydrides or (ii) one or more polyhydric alcohols and one or more monobasic fatty acids or one or more triglycerides.
- 15 20. An aqueous emulsion of an alkyd resin which includes as an emulsifier a compound of formula (1) as defined in any one of claims 1 to 12 in combination with an anionic surfactant, particularly an alkyl ether carboxylate, an alkyl aryl sulphonate, a phosphate ester, an alkyl ether sulfate, or a mixture of at least two such anionic surfactants, where the weight ratio of compound(s) of the formula (1) to anionic surfactant is in the range 90:10 to 10:90.
- 20 21. A method of making an aqueous emulsion of an alkyd resin which comprises forming a mixture of the resin and surfactant, including at least one compound of formula (I) as defined in any one of claims 1 to 12, including water in the mixture to form a water-in-oil (resin) emulsion, and subsequently adding water to the water-in-oil emulsion at least until the emulsion inverts to form an oil (resin)-in-water emulsion and, optionally, adding further water to adjust the disperse phase content of the emulsion to that desired.
- 25 22. A paint which comprises:
- 30 (1) an aqueous or mixed aqueous organic continuous phase;
- (2) an alkyd resin emulsion discontinuous phase;
- (3) at least one compound of formula (I) as defined in any one of claims 1 to 12 as an emulsifier; and
- (4) at least one pigment.
- 35